Adobe® Creative Suite® 6 Production Premium

End-to-end workflows for Panasonic P2 and P2HD cameras

Everything you need, everywhere you work

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- Adobe Audition
- Adobe SpeedGrade
- Adobe Prelude
- Adobe Encore
- Adobe Media Encoder
- Adobe Story Plus

Adobe Creative Suite 6 Production Premium provides tight, comprehensive support for Panasonic P2 cameras. Edit your P2 footage quickly and efficiently with native support, breakthrough performance in the 64-bit, GPU-accelerated Mercury Playback Engine, and tight integration between Adobe applications.

Adobe Creative Suite 6 Production Premium is tightly-integrated suite of applications intended to cover every aspect of video and content creation, from logging and injest, to editing and effects, to audio, through to export and delivery.

Adobe Premiere® Pro, After Effects®, and Encore® are principally involved in the P2 workflow. Most work with P2 content will be done in Adobe Premiere Pro, and it will be through Adobe Premiere Pro that most of the other CS6 applications will usually be accessed in the P2 workflow. Many of the techniques described in this paper are applicable to CS4, CS5, and CS5.5 programs, but with CS6, the level of performance in the P2 environment has been greatly enhanced. Some of these techniques are applicable to CS3 as well. As of CS5, a 64-bit operating system is required for Adobe Premiere Pro and After Effects.

Adobe Premiere Pro provides complete, native timeline support for all current P2 recording formats. Adobe Premiere Pro supports DV, DVCPRO, DVCPRO 50, DVCPROHD, and AVC-Intra at all frame sizes and frame rates, both 60 Hz- and 50 Hz-based.

Working with tapeless P2 media in Adobe Premiere Pro gives you several advantages. There is no transcoding; all formats are supported in their original MXF wrappers as recorded by the P2 camera. You can begin editing the exact files recorded by the cameras immediately after shooting, straight from the P2 card, or even straight from the camera—there is no waiting. You can share media between users and other NLE systems in its native format, and you maintain the full quality of the footage throughout the entire production process.

Adobe Premiere Pro also will also display the full metadata recorded with P2 assets. Some of the metadata can be searched and sorted on in the Project panel and also in the new Media Browser panel.

Adobe Premiere Pro provides a full array of export options from the timeline. Most common formats can be accessed through Adobe Media Encoder. Adobe Premiere Pro will also export, directly or through Adobe Media Encoder, a timeline sequence in native P2/MXF format, suitable for swapping between editing systems, or even writing directly to a P2 card and accessing in-camera.

After Effects also supports P2 material in its native MXF format. After Effects supports all frame sizes and rates as well, including AVC-Intra. After Effects can import P2 material directly; it can import Adobe Premiere Pro P2 project files and sequences, or it can create composites with P2 material inside an Adobe Premiere Pro sequence using Adobe Dynamic Link, which is now significantly faster in CS6.

Adobe Encore CS6—now 64-bit—can be used to create standard-definition DVDs, Blu-ray DVDs containing High Definition material, and web versions of DVDs—HD Flash video for web or DVD content.

All CS6 Production Premium applications are nearly identical between the Windows and Mac versions (some very minor differences will be noted later). Most application project files (Encore excepted) work in either platform, so crossing between platforms is as simple as accessing the media files and the project files with either system, either over a network, or with external hard drives. For example, you can work in the field with a low-cost Windows laptop and then transfer all work to a Mac desktop station, or to work

Top benefits

with both Windows and Mac stations on the same network. (However, not all media types are cross-compatible between Windows and the Mac OS.)

This paper will cover:

Part 1: Acquiring and archiving footage to be edited. Ways of acquiring P2 footage through shooting, from NLEs, from sharing files, or from content generated by P2 software and equipment, methods for archiving the footage, P2 file structure, and accessing footage on your computer.

Part 2: Ingesting and logging footage in Adobe Prelude CS6. Get into the creative zone faster by ingesting and logging your clips in Adobe Prelude and then bring them into Adobe Premiere Pro CS6, retaining In points and Out points set in Prelude that help you quickly produce a rough cut.

Part 3: Working in Adobe Premiere Pro. Project setup, importing footage, working with the footage, and exporting to a variety of formats. We will explore integration with Adobe Encore and After Effects through Dynamic Link.

Part 4: Working in After Effects. Importing footage, creating composites, working with the footage, and exporting through the render queue, as well as integration with Adobe Premiere Pro through Dynamic Link.

Part 5: Adobe CS6 Production Premium HD delivery options. Production Premium offers a wide array of HD delivery options, including P2 format, content for the Web, Blu-ray Disc authoring, and even export to HD tape for broadcast.

Part 1: Acquiring and archiving footage to be edited

Acquiring P2 footage

The most common method for acquiring footage in P2 format is to shoot with any of the Panasonic P2 and P2HD camcorders: the high-definition AG-HPX170PJ, AG-HPX250PJ, AG-HVX200A, the AG-HPX370, the AG-HPX500, the AJ-HPX2000, and the AJ-HPX3100GJ, as well as the AJ-HPX2700 and AJ-HPX3700 Varicams. (Model numbers may vary slightly by region.)

The AVC-Intra codec is implemented by Panasonic in several of its P2HD broadcast cameras, including the HPX250PJ, the HPX2000 (with optional AJ-YBX200 codec board), the HPX3100GL, and the HPX2700 and HPX3700 Varicams.

Footage may be acquired in other ways as well. The AJ-HPM200 P2 Mobile six-slot recorder/player, as well as the HPX370, HPX2000, HPX2700, and HPX3700 cameras, have the ability to create subclips or roughly-edited sequences from P2 footage stored on P2 cards, and to output them in P2 format to a P2 card. Workflow with these types of clips will be the same as with any other method of acquisition.

Footage already shot may also be delivered on storage media such as hard disk drives, digital tape, optical media such as CD, DVD, or Blu-ray, or by any other file storage system. As long as the P2 file structure is maintained, these files are identical to the files recorded on a P2 card.

Also, P2 footage may be created from the timeline of various NLEs, including Adobe Premiere Pro CS6, and then exported to P2 format as data files, or played out to a P2 camcorder and recorded directly to the P2 cards.

As video is shot with a P2 camcorder, it is recorded to the P2 card. The P2 card is a mass media storage device which is functionally identical to other storage devices like hard drives or flash drives. The media files are stored in an IT file system with folders, subfolders, and a text file called "LastClip.txt" – this text file stores the file name of the last clip shot, and when transferring media to another drive, it should be kept along with the rest of the folders and files.

Next to the LastClip.txt file is a folder called "Contents." In it are six subfolders – Video, Audio, Clip, Icon, Proxy, and Voice. These folders contain various files which make up the P2 data. The Video folder contains the video portions of the footage, while the Audio folder contains the audio files. The Clip folder contains XML files which store the metadata recorded with each clip. The Icon folder contains small .bmp thumbnail images of each clip. The Voice folder contains audio files of

any voice memos recorded with the clips (a function available on the HPX2000, HPX3000, HPX2700, and HPX3700 cameras as well as the P2 Mobile. Voice memos can also be added in P2 Viewer). The Proxy folder contains low-res proxy video of the footage shot (again, available on the HPX2000/3000 and Varicam cameras and the P2 Mobile).

For the P2 system to function correctly, *all* folders and files must be kept intact and in their respective folders. If they are not, vital information will be lost and the footage may not be usable.

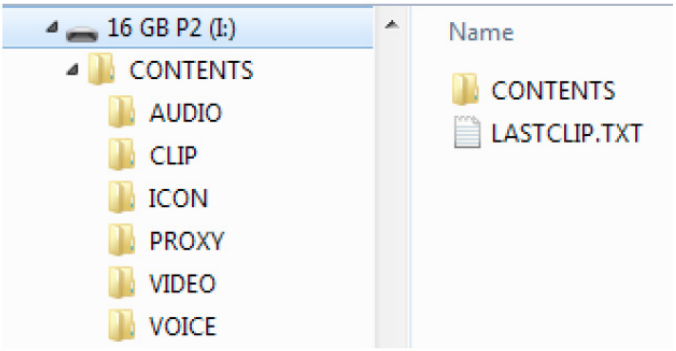
Panasonic P2 drivers and software

Before working with P2 footage, download and install the P2 drivers and P2 support software. They can be found at *http://www.panasonic.com/business/provideo/support/software.asp*.

The drivers will allow the computer to access and understand P2 hardware, including the P2 cards themselves. The support software, including P2 Viewer and P2 Contents Management Software (P2CMS), will provide a substantial set of tools for working with the P2 card contents. (The Mac version of P2 Viewer is included with P2CMS.)

Archiving footage

It is highly recommended that P2 data be archived before working with it. The data on P2 cards is properly thought of as computer data, and not "video" data, and it should be archived accordingly.



There are numerous archiving options. Whichever method you choose, be sure to keep the entire file structure intact and include the corresponding LastClip.txt file. The best options include:

1. **Hard disk drives**—Transfer the P2 data just as you would any other data; this can be to an internal drive, but an external drive—whether over USB 2.0 or IEEE-1394 400/800 (FireWire)—would be most useful for long-term storage.

2. **Optical media**—The most useful variety will be Blu-ray Discs, because they are the highest-capacity and can store multiple cards on a single disc, but standard DVD+/-R DVDs and dual-layer DVDs can be used to store single, smaller cards.

3. **DLT or LTO tape**—Not *video* tape; DTO or LTO tapes are designed to store computer data instead of video footage, and can store hundreds of gigabytes per tape.

Hard disk drives

To transfer to hard disk drive, the best option is to use P2 Viewer (in Windows) or P2CMS (Windows or Mac). This will allow you to create "virtual cards" with the correct file structure and all necessary files and folders intact, as well as mixing and matching clips from multiple cards as you see fit. This will allow you the greatest flexibility and control over your archiving process.

Or, you can simply copy over the existing folders and files of a card, making sure, as noted several times, to keep the file structure intact, including the LastClip.txt file. You will need to create separate folders for each card, as each contains a Contents folder and LastClip file, and you cannot rename them and maintain P2 functionality.

To maintain functionality between Windows and Mac systems, a hard disk drive can be formatted as FAT32, which is compatible with both systems. All P2 cards are formatted as FAT32, so any card will be able to be stored to a FAT 32 disk drive. However, cards may also be stored on hard disk drives using the Windows NTFS or Mac HFS+ file systems. For cross-platform access, Windows users can use software such as MediaFour's MacDrive to read and write to Mac-format drives. Mac users can read NTFS drives natively, but for read-write capability, additional software such as Paragon Software's NTFS for Mac is required.

Optical media

To archive onto optical media, you will need an appropriate DVD burner and burning software (such as Nero) to create data (not video) DVDs. Again, you would maintain the P2 file structure and

LastClip file. You can burn a single 4 GB card to a DVD+/-R, a single 8 GB card to a dual-layer DVD, or multiple cards to a Blu-ray DVD, again creating separate folders for each individual card.

Archiving to DVD can also be done through Adobe Encore. To do this, choose File>Select DVD ROM Folder, and then navigate to a P2 card; choose the folder level containing both the Contents folder and the LastClip.txt file. Then go to File>Build and pick "Disc" from the submenu. In the Build panel, you may choose the DVD size from 3.95 GB, 4.7 GB, or 8.54 GB Dual Layer. Under Output, choose "DVD Disc." When you click "Build," choose "Ignore and Continue" when the box pops up warning there is a problem which may cause the disc not to play; it is unnecessary to make a playable video DVD. After you click, the process will continue automatically with instructions.

For optimal performance, it is recommended to store the P2 data on hard drives in a striped RAID, allowing for increased transfer speeds, very useful for better playback performance of multiple streams and clips with added effects.

Digital tape

For archiving to digital data tape, Quantum offers DLT and LTO tapes and drive which specifically understand the P2/MXF file structure. LTO-3 tapes are high-capacity and can store several hundred gigabytes of data. Drives such as the Quantum LTO-3A and SDLT 600 are P2/MXF compatible.

Flash media

Small cards can be stored on flash drives or memory cards of 4 GB or higher; however, the data rates and error rates for those cards may not be appropriate for direct editing from them, especially HD footage. Cards stored on such drives should be transferred to hard disk before being used. The process for transferring to a flash drive or memory card is the same as for storing to hard disk drive.

Archiving to video tape

Footage can also be stored, with no quality loss, on video tape; DV/DVCPRO can be stored on DV tape. DVCPROHD, DVCPRO 50, and DVCPRO footage can be stored on DVCPRO tape.

To archive on video tape from Adobe Premiere Pro, you can use File>Export>Export to Tape. DV footage can be printed through 1394 with a DV deck or camcorder. Printing to DVCPRO 50 or DVCPROHD decks will require a hardware card, such as those from AJA or Blackmagic Design.

Archiving to video tape will mean the loss of all metadata and will require linear capture for future use. Footage originally recorded in 720p Native modes will be recorded to tape as "over-60" or "over-50" and will lose any space-saving or timeline advantages that the Native mode affords when on a P2 card.

Accessing P2 footage on your computer

There are a number of ways to read P2 data within Adobe CS6 Production Premium:

Reading P2 cards directly

The quickest path to working with P2 footage would be to read the data directly from a P2 card—this can allow you to edit your footage literally seconds after shooting, with no waiting for capture or transcoding. The footage is ready to edit as soon as it is recorded.

As the P2 card is a mass storage device, it can be read directly by either Windows or the Mac OS the same as any other storage device. Whichever method is used, in order to read a P2 card as a device, the computer must have the Panasonic P2 drivers installed.

Various options exist to connect a P2 card directly to a system. The P2 camcorder itself can be used as a card reader when connected to the computer—through IEEE-1394 on a Mac and through USB 2.0 on a Windows machine. Likewise, an AG-HPG20 P2 Gear player/viewer/recorder may be used. (Using 1394 with Windows or using USB 2.0 with the Mac OS are not certified for complete functionality.) A P2 Mobile in card reader mode will work as well.

There are several options for a direct connection. The AJ-PCD30PJ is a three-slot card reader which connects to the computer through USB 3.0 or IEEE-1394. The P2 Drive has the advantage of reading all cards inserted as a single card, automatically stitching together any spanned clips between cards, and making the data on several cards accessible all at once.

Another way to connect a P2 card to a computer is through a PCMCIA slot. The P2 card conforms to the 32-bit CardBus standard, so it can be read with any reader which is capable of reading that standard. Many laptops are equipped with this slot. For desktops, there are PCI-to-PCMCIA adapter cards available which will allow direct connection. Again, the reader must conform to the 32-bit CardBus standard in order to be used with a P2 card.

A laptop with an ExpressCard reader may also be used with a PCMCIA adapter, such as the DuelAdapter available from Duel Systems or the Addonics ADEXC34CB. Again, the P2 driver and support software must be installed. (Check with the adapter manufacturers for driver updates for compatibility with OS system updates.)

Another method for connecting a P2 card to a system which does not have a PCMCIA slot is to network with a laptop with such a slot over a Gigabyte-E network port. Once connected and set up, the laptop's card slot will act as though it is a slot integrated directly into the system, with data transfer speeds comparable to a direct connection. However, a slower connection, such as with a 10/100 "Fast Internet" port, will not have comparable transfer speeds.

Using any of these methods, Adobe Premiere Pro, After Effects, Adobe Prelude, and Encore can read, import, and edit the footage on the cards exactly as if it were stored on a hard disk drive.

Offloading cards to hard disk

P2 cards may also be offloaded to hard disk drive and accessed by Adobe CS6 Production Premium applications as any other files. Files may be transferred directly from the card to an internal or external hard drive using any of the methods above to connect the card to a computer, and then using the computer's operating system to transfer the files. For a direct transfer, it is vitally important that both the Contents folder and the LastClip.txt file are saved together and completely intact; creating a new folder for each P2 card will allow for this.

It is highly recommended, though, that instead of a direct transfer of files through Windows Explorer or Mac Finder, P2 cards should be offloaded using P2 Viewer or P2CMS. These programs allow for greater control and monitoring of the transfer process, and offer the stitching of spanned clips. You can also use them to group clips as you wish and create new P2 cards which can then be transferred back to a physical P2 card, or used as P2 data with CS6 Production Premium and other P2-aware applications.

Direct access of P2 data is the same whether you read from the P2 card or from a hard disk or other storage device – you use Windows Explorer or Mac Finder to navigate to the drive, and then to the specific card volume, where you can access any of the data in the P2 Contents folder or subfolders. You are now ready to import the P2 data into a Creative Suite 6 Production Premium application.

Part 2: Ingesting and logging footage in Adobe Prelude CS6

Adobe Prelude CS6 software helps you more easily manage file-based media, so you can get into the creative zone faster. Prelude allows you to ingest full or partial media clips that were shot in virtually any file-based format, including Panasonic P2 formats, copy or transcode them to your preferred editing format during the ingest process, and view clip thumbnails in the Ingest dialog box as you work. While watching footage, you can create rough cuts by marking In points and Out points and adding searchable temporal markers, comments, and tags to your clips. All of that information is stored as metadata in your media files, which flows directly into Adobe Premiere Pro when you import those files. And when you start editing, those searchable metadata-based markers, comments, and tags help communicate the producer's intentions, as well as help you sift through mountains of footage to quickly find what you're looking for. Better still, that same metadata stays with your media assets throughout the production workflow, so you and your clients can keep track of vital details such as rights and permissions, and when finished projects are delivered online, your audience can more easily find your content via search engines.

Part 3: Working in Adobe Premiere Pro CS6

Adobe Premiere Pro project setup

Adobe Premiere Pro enables a flexible, accessible, and comprehensive workflow for editing, refining, and delivering content. Start by creating a new project and choosing a preset that best matches your source footage. Adobe Premiere Pro provides a unique project preset for each supported P2 format, for example, DVCROHD 1080i60. Alternately, you can start with a generic sequence—Adobe Premiere Pro CS6 automatically detects and notifies you when a clip dragged onto the timeline doesn't match the sequence settings, enabling you to easily choose to retain the sequence settings or change them to match the clip's settings.

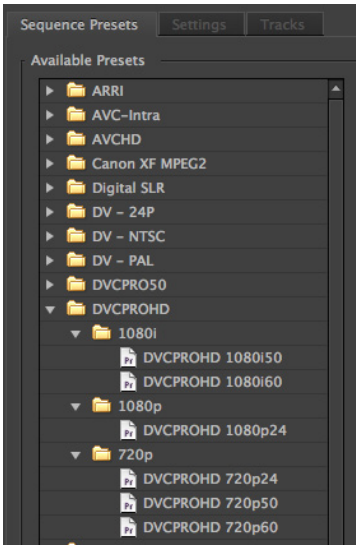
You can create multiple sequences with any settings and group them together into a single sequence of any settings. So, you can work in one sequence with settings for 720p and in another with settings for 1080i—even at different frame rates—but you can nest either sequence into the other, or you can nest them both into a third sequence of even different settings. How close to real-time playback you are able to achieve will depend upon your system hardware.

If you do not create a sequence when opening the project, you can create one by pressing Control+N (Windows) or Command+N (Mac), or by right-clicking, or Control+clicking (Mac), in the Project panel and choosing "New Item>Sequence." You will then be given options for project presets; groups of presets will appear in the "Available Presets" box of the "New Sequence" panel, represented as file folders.

Sequence Settings

For P2 material, there are a number of preset options, but Adobe Premiere Pro CS6 gives you a convenient new way to get started quickly. Use the Media Browser to select and import your P2 files (see page 7 for details). Right-click one of your P2 clips in the Project panel, and then choose Create New Sequence From Clip. The new sequence settings will automatically match those of your clip. As mentioned above, if you should need to update your media with new video files that don't exactly match the original clips, Adobe Premiere Pro automatically detects and notifies you when a clip dragged onto the timeline doesn't match the sequence settings, giving you the option to keep or change the sequence settings to match the clip's settings.

If your preferred method of working is to start by choosing a sequence setting that matches your media, Adobe Premiere Pro gives you a comprehensive set of presets to choose from:



All DVCPROHD frame sizes and frame rates are grouped together.

DVCPROHD 720p—for HD material, the project preset should be chosen according to the frame rate. In the DVCPROHD folder, there is a subfolder labeled "720p" containing the 720p presets.

- For 720/24p (N or "P") footage: choose DVCPROHD 720p24
- For 720/60p footage: choose DVCPROHD 720p60
- For 720/50p footage: choose DVCPROHD 720p50

There is no preset for 30pN, but you can either edit as 60p, or you can modify the preset in the General tab. There, you would go to the Timebase dropdown and select "29.97 frames/second."

For 25pN footage, select the 50p preset, and change the Timebase to 25.00 frames/second.

For 30P (not Native) and 25P (not Native), you should edit as 60p and 50p, respectively, or you can create the specific timebase settings for the frame rates.

For Native-mode variable frame rate footage, choose (or create) the preset which matches the timebase the clip was recorded in—24p, 25p, 30p, 50p, or 60p—as opposed to the variable frame rate (12 fps, 22 fps, 36 fps, etc.). In the Native mode, the footage is already recorded in its Native frame rate; nothing needs to be done with it when working in a matching sequence.

DVCPROHD 1080i/p—like 720p, there is only one frame aspect ratio for 1080 footage – 16:9. There are two subfolders for 1080 footage under DVCPROHD—"1080i" and "1080p." (See inset above.)

- For 1080/24p or 24pA footage, choose DVCPROHD 1080p24
- For 1080/60i footage, choose DVCPROHD 1080i60
- For 1080/50i footage, choose DVCPROHD 1080i50

Again, for 1080/30p and 1080/25p, there are no presets, but they can edited as 60 Hz or 50 Hz, or presets can be created by following the same methodology as with the Standard Definition presets below.

AVC-Intra 720p—the sequence Presets for AVC-Intra 720p footage are contained in a single folder.

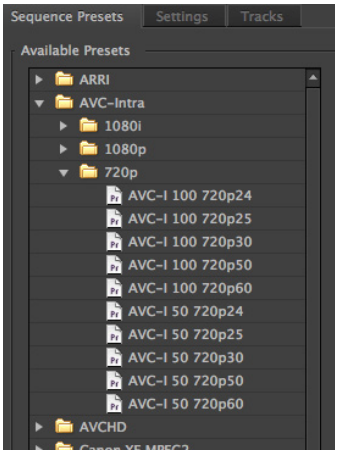
As with DVCPROHD footage, choose the preset which best matches your footage. For variable frame rate footage, select the preset according to your overall timebase.

1. AVC-Intra 100

- For 720/60p footage, choose AVC-I 100 720p60
- For 720/50p footage, choose AVC-I 100 720p50
- For 720/30p footage, choose AVC-I 100 720p30
- For 720/25p footage, choose AVC-I 100 720p25
- For 720/24p footage, choose AVC-I 100 720p24

2.AVC-Intra 50

- For 720/60p footage, choose AVC-I 50 720p60
- For 720/50p footage, choose AVC-I 50 720p50
- For 720/30p footage, choose AVC-I 50 720p30
- For 720/25p footage, choose AVC-I 50 720p25
- For 720/24p footage, choose AVC-I 50 720p24



AVC-Intra Sequence Presets. There are two sets of bitrate presets from which to choose—100Mbps and 50Mbps.

AVC-Intra 1080i/p—the Presets for 1080 material are split between 1080i and 1080p. As there is no 60p or 50p recording in 1080 mode, the only 60 Hz and 50 Hz presets are for 60i and 50i.

All available frame rates for 1080i in both AVC-Intra 100 and AVC-Intra 50 are in the 1080i folder. All available frame rates for 1080p in both AVC-Intra 100 and AVC-Intra 50 are in the 1080p folder.

Choose your preset according to the bitrate and frame rate of your footage.

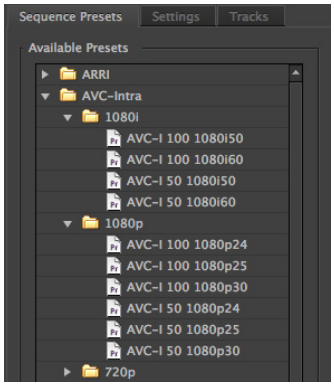
1. AVC-Intra 100

- For 1080/60i footage, choose AVC-I 100 1080i60
- For 1080/50i footage, choose AVC-I 100 1080i50
- For 1080/30p footage, choose AVC-I 100 1080p30
- For 1080/25p footage, choose AVC-I 100 1080p25

For 1080/24p footage, choose AVC-I 100 1080p24.

2. AVC-Intra 50

- For 1080/60i footage, choose AVC-I 50 1080i60
- For 1080/50i footage, choose AVC-I 50 1080i50
- For 1080/30p footage, choose AVC-I 50 1080p30
- For 1080/25p footage, choose AVC-I 50 1080p25
- For 1080/24p footage, choose AVC-I 50 1080p24



Progressive and interlaced presets are grouped separately, and then by bitrate.

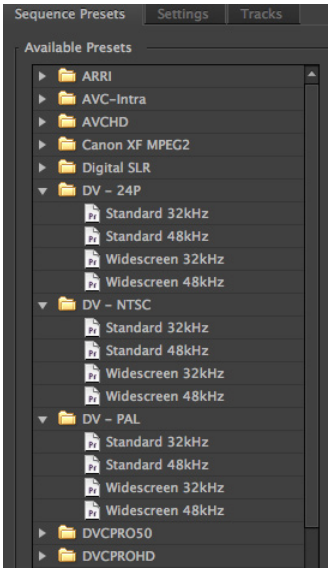
Standard Definition (DV, DVCPRO, and DVCPRO50)—Standard Definition footage can have two frame aspect ratios: 4:3 (standard) or 16:9 (widescreen). It is important to choose the correct ratio from among the sequence options.

With DV or DVCPRO (25) footage, you will use the same presets. There are three separate preset folders: DV-24p, DV-NTSC, and DV-PAL. Choose the folder according to your footage – for 24p DV, choose DV-24p; for 60i or 30p DV, choose DV-NTSC; for 50i or 25p DV, choose DV-PAL.

Each group includes four presets—two standard, two widescreen; the difference between the two is the audio sample rate. Under almost all circumstances, choose the template with the 48 kHz sample rate instead of the 32 kHz. If you did happen to record in the 32 kHz rate, choose that option only if no other footage with 48 kHz sampling will be in the project.

So, for individual types of footage, make the following choices:

- For 24p or 24pA footage: choose DV-24p, Standard or Widescreen, 48kHz
- For 60i footage: choose DV-NTSC, Standard or Widescreen, 48kHz
- For 50i footage: chose DV-PAL, Standard or Widescreen, 48kHz
- 30p footage: there is no preset, but you can either simply choose DV-NTSC, Standard, or Widescreen, 48 kHz, and edit in that sequence, or you can choose that preset and modify it by going to the General tab, finding the "Fields" drop-down menu in the Video box, and changing from "Lower Field First" to "No Fields (Progressive Scan)."



DV Presets. 24p presets are contained in their own folder.

You may then click "Save Preset" at the bottom of the box and name it as you wish. It will then appear under the Custom folder in the Available Presets menu.

25p footage: similar to 30p, there is no preset, but you can chose DV-PAL, Standard or Widescreen, 48 kHz, and make the same change and save it as a Custom preset if you wish.

For DVCPRO 50 footage, all presets are contained in the same folder. There are two subfolders, 480i (for NTSC) and 576i (for PAL). In these two folders are the presets you will choose from.

- For 24p or 24pA footage: choose 480i, DVCPRO50 24p Standard or Widescreen
- For 60i footage: choose 480i, DVCPRO50 NTSC Standard or Widescreen
- For 50i footage: choose 576i, DVCPRO 50 PAL Standard or Widescreen

As with DV, there are no default presets for 30p or 25p, so you can either use the NTSC or PAL standard presets, respectively, or you can create progressive presets by again going to the General tab and changing the Field Order to "No Fields (Progressive Scan)."

Importing footage into Adobe Premiere Pro

There are three ways to import P2 data into Adobe Premiere Pro CS6. You can import footage before creating a sequence.

The Media Browser

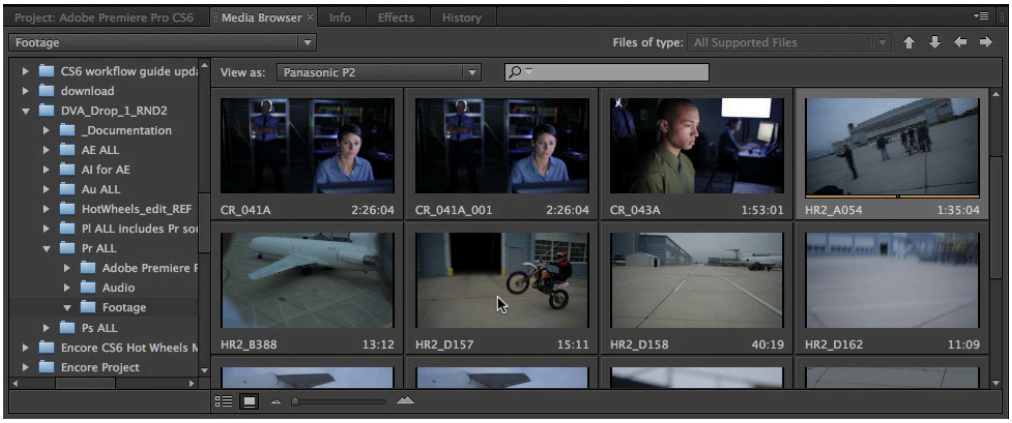
The Media Browser panel offers the most efficient option for importing clips. The Media Browser allows you to view and scrub through 16:9 thumbnails of the P2 media, displays the user-friendly clip name, and provides full support for clip spanning and card spanning.

The Media Browser lists your storage devices; clicking on the arrow next to each letter will reveal the folders on that drive. Navigate by clicking the disclosure triangles to a folder containing a P2 card ("twirling to a folder")—or to a P2 card itself if mounted on the system—and in the sub-panel immediately to the right, thumbnails of your clips will appear. (If the thumbnails do not appear, select View As: Panasonic P2.) In Thumbnail View, resizable 16:9 thumbnails are displayed that you can play and scrub through without first having to open them in the Source Monitor, giving you more immediate access to your content.

UserClip Name—if a UserClip Name is assigned in the P2 metadata, it will be displayed instead of the 6-digit identifier assigned by the camera. (If no UserClip Name is assigned, the Media Browser will display the long GlobalClipID.)

Shot Mark—the P2 metadata Shot Mark corresponds with the Good column in the Media Browser when it's set to List View, the Project panel in List View, and wherever the Good column appears. If a P2 clip carries a Shot Mark, the word "Yes" will appear in the Good column. (In the Project panel; it will appear as a check mark in the box.) If you tag the clips you wish to use with Shot Marks in

camera on the shoot, or in P2 Viewer—for example, using the Shot Mark as a "circle take" function—you can sort them on the Good column and import only those clips as a group.



P2 clips as they appear in the Media Browser when it's in Thumbnail View. You can preview clips using the convenient clip playhead. Hover scrubbing is also supported in the Adobe Premiere Pro CS6 Media Browser.

You can also sort the clips by any of the metadata columns available in List View, so if you wish to group your clips by Clip Name, or frame rate, or any other of the applicable columns, you may do so before importing. If you have, for example, assigned UserClip Names according to scene number, with incremental take numbers, in the P2 metadata, the clips can be sorted accordingly before you decide which to import.

In List View, to the right of the clip thumbnail and the clip Name, you will see numerous columns of metadata. You can select which columns are displayed, and in what order, by clicking on the flyout menu icon in upper right of the Media Browser panel, and choosing "Edit Columns."

To import a clip from the Media Browser into Adobe Premiere Pro directly, you can drag a thumbnail to the Project panel, or you can right-click and choose "Import." Continuous takes split into 4 GB clips—clips that span P2 cards—when recorded will be automatically imported as a single clip. Once imported, clips can be played using a convenient clip playhead or hover scrubbed, plus you can now set In points and Out points directly in the Project Panel, saving even more time by not having to first open clips in the Source Monitor.

If you wish to review clips *before* deciding to import them, a clip in the Media Browser can be played or scrubbed without importing into the project using the convenient clip playhead or by hover scrubbing without first having to open the clip in the Source Monitor.

File>Import

You may also use the Import selection under the File Menu (or Ctrl+I in Windows or Command+I on the Mac). In the Import dialogue box, you would then navigate to the Video folder of a P2 card and select the MXF files for import. As with the drag/drop method above, the corresponding audio files will be linked automatically. This method does not provide support for linking spanned clips.

Drag and drop

You may also use Windows Explorer or Finder to navigate to the Video folder of a P2 card. Then, you may simply drag the video files to the Project panel in Adobe Premiere Pro, which will automatically link the video to the corresponding audio files in the Audio folder. (If you navigate to the Audio folder and import a single MXF audio file, the corresponding video will not be imported with the audio — but all corresponding audio MXF files will be brought to the timeline with that MXF file.) This method, too, will not link spanned clips.

Working with metadata

Adobe Premiere Pro CS6 has powerful tools for media management by working with the metadata stored with each clip. At its most basic, all of the metadata stored with a P2 clip can be viewed simply by right-clicking or Control-clicking a clip in the Project panel and choosing "Properties." The Properties panel will open and all metadata can then be viewed.

Under the Window menu, the Metadata panel can be activated. The panel is divided into three sections—Clip, File, and Speech Analysis. The Speech Analysis section will display the text transcript of the spoken words in the audio if the clip has been analyzed with the Analyze Content tool, as mentioned below.

Many metadata fields in the Clip and File sections may be edited. The data will be saved and viewable as an XMP™ file created to be associated with the clip. This XMP data is viewable in other applications which support XMP, including all the other applications in the Creative Suite. Thus, the changes made are viewable, and the metadata is editable, in other CS6 applications such as After Effects and Encore. The XMP files are saved in the Clip folder of the P2 card. No changes will be made to the P2 card's XML files.

Adobe has created a Workspace configuration called "Metalogging" that is useful when browsing and importing footage using the Media Browser. Go to Panel>Workspace>Metalogging, or Alt+Shift+5 (Windows) or Option+Shift+5 (Mac).

Not all metadata from the P2 card is viewable or editable in the Metadata panel, or in the project or Media Browser panel columns. Also, many of the metadata fields in the XMP files/viewer do not correspond with P2 metadata items.

Working with media in the Project Panel

All project media files appear in the Project panel. The media files can be listed entirely as separate items, or they can be organized into a file/bin structure for ease of media management.

Multiple P2 clips which comprise a single take will be "stitched" in the Project panel and display as a single clip. This is true of clips spanned over multiple cards, and also of multiple clips from the same P2 card which are split because they exceed the 4 GB file size limit of FAT32.

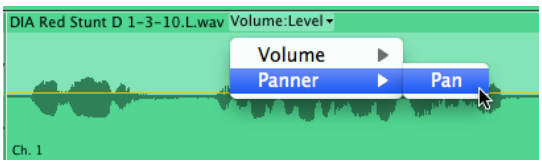
As in the Media Browser panel, if a UserClip Name is assigned in the P2 metadata, P2 clips are displayed with the clip names corresponding to the UserClip Names, and not with their universal 6-digit file names assigned by a P2 camera. If no UserClip Name is assigned, the clip name in the Project panel will be the 6-digit name. If a clip carries a Shot Mark in the metadata, the box in the Good column will be checked.

Media items are listed with numerous columns of metadata. The default set of columns is the legacy display of information common to previous versions of Adobe Premiere Pro, but they can be deselected, or more/different columns added, by clicking on the flyout menu icon in upper right of the Project panel, and choosing "Metadata display." Column order can be changed by dragging columns.

In the Metadata Display panel, you can choose which columns to display by checking or unchecking their boxes.

The project can be sorted on any of the columns. Some of the metadata in the columns can be edited directly in the Project panel; changes will be saved to the XMP file.

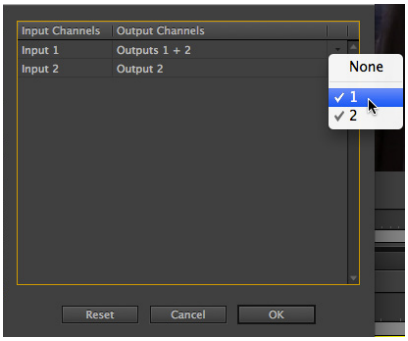
Panning mono audio tracks



A new audio track type included in Adobe Premiere Pro CS6, called Standard, is a particularly useful tool when working with AVC-Intra, DVCPROHD, or DVCPRO 50 footage with four mono channels of audio. When placed on a Standard audio track, mono clips can

be panned left or right in a stereo mix using the Clip Panner effect, which is located directly on the timeline.

Another new audio track type, called Adaptive, lets you easily reroute any audio source channel to any combination of audio output channels. Simply click the Track Routing icon in the Track Header of an Adaptive audio track to open the Channel Output Mapping dialog box, and then use convenient drop-down menus to assign input channels to output channels.



Working with 24p/Pulldown removal

Adobe Premiere Pro has comprehensive support for all modes of 24p recorded by P2 camcorders.

To edit and save the XMP metadata, including making a speech transcript, it is important to make sure any write protection is disabled. In Windows, uncheck "Read Only" in the Contents folder Properties, and make sure it applies to all subfolders and files. In the Mac OS, make sure the Contents folder's Ownership & Permissions is set to "You Can Read & Write."

DV/DVCPRO/DVCPROHD—with 1080/24p footage, Adobe Premiere Pro will automatically detect the pulldown flags embedded in the footage, whether recorded with standard 2:3 pulldown (24p), or with 2:3:3:2 Advanced pulldown (24pA). In a 24p sequence, either version of pulldown will be removed automatically, and the footage properties will recognized as having a frame rate of 23.976. On the timeline, you will be working the native 24p frames only. In a 59.94i sequence (also known as 60i, 30i, or standard 29.97 interlaced), the pulldown will not be removed, and the footage properties will read as 29.97. Most of the time, you will want to work in a 24p sequence with the pulldown removed, but if you are mixing the footage in a sequence with footage of other frame rates, it is often best to work in 59.94i.

With 480/24p material, whether DV, DVCPRO, or DVCPRO 50, Adobe Premiere Pro functions the same as with 1080, whether the material was shot with standard or advanced pulldown, detecting and removing the pulldown in 24p sequences and leaving it in place in 60i sequences.

For footage shot in the 720/24P (non-Native) mode, which are recorded in 60p streams, Adobe Premiere Pro will automatically remove the duplicate pulldown frames and work with the footage as native 23.976p. Adobe Premiere Pro will also recognize 720/30P and 720/25P (again, non-Native mode) at their native frame rates, removing duplicate frames from the "over-60" or "over-50" streams.

Working with 24pN, 25pN, and 30pN—no pulldown removal or footage interpretation is required for footage shot in the DVCPROHD720 native "N" modes; those modes are recorded in their native timebases with no pulldown. This includes variable frame rate footage.

AVC-Intra—in AVC-Intra, as all frame rates are recorded as Native, there are no over-60 or over-50 recording modes. Therefore, with AVC-Intra footage, there is never any pulldown or any extra frames to remove.

Working with variable frame rates

When using variable frame rates in AVC-Intra or in the DVCPROHD 720 Native modes, these, too, are recorded on a per-frame basis in the overall frame rate you select. If your overall frame rate is 24p, and your variable frame rate is 12 fps, those 12 frames per second will be line up, frame-for-frame, as 24 frames per second. When played back from the Native file, the footage will play back twice as fast as real-time. Frame rates lower than 24 will have the same, but lesser, effect. If your variable frame rate is higher, the 23.976 file recorded will play back with slow motion, with the motion slower the faster your variable frame rate is. There is no need to use Interpret Footage or change the playback rate of the clip; as the clips are recorded as 23.976, all apparent speed adjustments have already been done while recording. The same principle applies all frame rates.

Editing footage in Adobe Premiere Pro

Footage can be edited either directly from the P2 cards, as noted before, or from a hard disk drive. With a fast, modern processor and at least 2 GB of RAM, Adobe Premiere Pro can edit multiple streams of HD footage at real time, and performance is much faster in Adobe Premiere Pro CS6 thanks to the enhanced Mercury Playback Engine, which delivers native 64-bit support, GPU acceleration, and other performance and stability improvements (see Previewing below). With the Mercury Playback Engine, you can edit HD as fluidly as SD: open projects faster, refine effects-rich HD and higher-resolution sequences in real time, enjoy smooth scrubbing and play back of complex projects without rendering. See results instantly when applying multiple color corrections, the new Ultra Keyer, Gaussian blurs and blend modes, and work with numerous other effects across many video layers. With industry-leading performance and rock-solid stability, you can work in real time on complex timelines and long-form projects with thousands of clips – whether your project is SD, HD, 2K, 4K, 5K, or beyond.

Editing from DVD or optical media is not recommended; the data transfer speeds from the drive will be too slow for effective editing.

Generally, any type of supported media may be dropped into a timeline of any sequence settings without any sort of transcoding or rendering. A red bar may appear above footage which does not conform to the sequence settings; this means that the footage must be rendered for final output, but (pre)rendering isn't necessary for playback on the timeline. Timeline playback may not be full-quality or without dropped frames, however. (If you wish to render for full-frame rate playback, press Enter, and Adobe Premiere Pro will create a rendered file and replace the footage with it.)

A yellow bar indicates that a clip does not match the settings of the sequence, but can *generally* still be played back in real-time without rendering. A green bar indicates that all necessary rendering is completed.

AVC-Intra 10-bit footage

AVC-Intra is a 10-bit codec, utilizing four times as much luma and chroma depth per pixel as standard 8-bit codecs. This allows for a great deal more precision and quality in the footage.

To take advantage of the full 10-bit quality of AVC-Intra footage, in the sequence settings, check the Maximum Bit Depth box in the Video Preview section of the General tab. This will require greater processor resources, so this is recommended only for powerful computers.

Supported NVIDIA and AMD graphics cards

The list of graphics cards that are compatible with Adobe Premiere Pro CS6 is updated on a regular basis. For an up-to-date list of supported cards, please see *www.adobe.com/go/64bitsupport*. For system requirements and compatibility, please see *www.NVIDIA.com*.

Mobile Mac workflows can take advantage of GPU-accelerated performance, thanks to new support for AMD Radeon HD 6750M and AMD Radeon HD 6770M graphics cards with a minimum of 1GB VRAM that are available on MacBook Pro computers running OS X 10.7.

Previewing in full-screen Cinema Mode or to an external monitor

Adobe Premiere Pro CS6 lets you put either the Program Monitor or the Source Monitor into full-screen "cinema" mode on your system's primary display. To do so, click on either the Source Monitor or Program Monitor, and then press Ctrl-Accent Grave (`). In addition, there are several options for an external preview. Both cinema mode and external preview offer numerous advantages. The entire video frame can be seen at full size, allowing for more detailed work; the project can be sent to the type of screen which will be the intended primary viewing source, such as an NTSC or PAL monitor or an ATSC High-Definition monitor, allowing an accurate representation of the picture for purposes of image manipulation, particularly color correction. It can be easier for display of a work-in-progress to a client or a group of people, etc. In general, it allows you to see your work as closely as possible to how your audience will see it.

When using external monitors, the new Adobe Mercury Transmit feature gives Adobe I/O hardware partners, such as AJA, Black Magic Design, Bluefish444, Matrox, and MOTU direct access to the Mercury Playback Engine, so that when you use external monitors, you'll get full-screen playback while maintaining all the real-time performance benefits of the Mercury Playback Engine.

External preview options are found by clicking the Output button under the preview panel, then choosing "Playback Settings . . ."

From there, you will be given a dialog box; external preview options are found in the "External Device" drop-down menu in the "Realtime Playback" pane.

For most projects, the preview can be sent as DV via 1394 through a DV camera or deck to a monitor, through composite or S-Video cables/inputs. This is ideal if working in a DV or standard-definition project, but it is not ideal if working in HD. HD material in either version can be previewed using an HD preview card, such as AJA's Kona (Mac) or Xena (Windows) cards, or Blackmagic Design's DeckLink or Intensity Pro cards.

Preview is accelerated using a Mercury Playback Engine-supported NVIDIA graphics card (GPU). The GPU can accelerate video playback with heavy effects to real-time if the card is powerful enough, depending on the footage type and level of effects. This can be very useful when working with high-bandwidth footage like DVCPROHD or AVC-Intra. Playback is also enhanced by OpenCL support with some effects on certain MacBook Pro computers.

The Windows version of Adobe Premiere Pro can also use the graphics card to preview on an external HD monitor if the card has a native HDMI output port, or through a DVI output using a DVI-to-HDMI adapter. For this, you must use the GPU's driver software to set up the output as a Windows display. Then, you should see that display as an option in the External Device drop-down.

Exporting footage from Adobe Premiere Pro

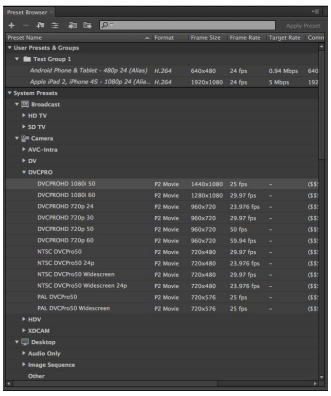
Exporting a sequence can be done in several ways.

As P2 format

Adobe Premiere Pro can create virtual P2 cards through Adobe Media Encoder, or by direct export.

Choose File>Export>Media, then choose "P2 Movie" in the Export Settings panel. There are many P2 format options available in the Preset drop-down menu. Choose your desired preset.

Export through Adobe Media Encoder—at the bottom of the Export Settings box are two buttons—"Queue" and "Export." If you press "Queue," Adobe Media Encoder will open. Pressing "Start Queue" in Media Encoder will begin the process; the timeline will be rendered and exported as a virtual P2 card, creating all necessary folders and files in the correct P2 file structure. A Contents folder will be created, holding all six subfolders. Video and Audio will be separated into MXF files and placed into the appropriate folders. All active audio tracks will be mixed down to stereo and saved in the Audio folder as two mono tracks representing left and right. (Only the two mono tracks will be included, regardless of format.)



Adobe Media Encoder CS6 lets you quickly set up encoding batches to deliver your content in virtually any device and video format. Included is a wide range of encoding presets, including presets for outputting to DVCPROHD and AVC-Intra.

This virtual card can be exported directly to a connected P2 card, or it can be exported to a selected drive and the folders and files copied over to the card. It can also be opened as a virtual card using P2 Viewer or P2CMS software and worked with as any other P2 card or virtual card.

Each export to P2 will result in a single clip. Multiple clips can send to the same Contents folder by defining the output folder to the level above it. For example, if the output folder is C:\Card Output, a Contents folder will be created in the Card Output folder. Multiple P2 exports to Card Output will result in new MXF clips being added to the existing Video and Audio folders, as well as the associated files in the Clip and Icon folders. The clips will be assigned separate 6-digit file names as they would in-camera.

Exporting to P2 format can be combined with multiple media format exports from Adobe Media Encoder, as described below.

Direct export—if you press "Export" instead of "Queue," you may export directly to P2 format without going into Adobe Media Encoder.

Other formats via Adobe Media Encoder

To export a completed movie file, go to File>Export>Media, and then choose the desired format in the Export Settings box. Click "Queue," and then Adobe Media Encoder will open, and the project will appear as a selection in the Source panel. From here, the output format settings may be changed, or multiple format settings may be added.

When encoding is started by pressing "Start Queue," a movie file in the desired format will be created; multiple files will be created if multiple settings selections are made.

As with P2 format, other formats may also be exported directly by selecting their presets and settings and pressing "Export" instead of "Queue."

Exporting to other CS6 applications via Dynamic Link

Note: Export to P2 format will result in two channels of audio, not four. All audio tracks will be mixed down to stereo and exported as mono (left and right) tracks.

An Adobe Premiere Pro project may be sent to Encore or opened as a new composition in After Effects by going to File>Adobe Dynamic Link and choosing the appropriate selection. The chosen application will then launch and the Adobe Premiere Pro project will appear in the Project panel of the application.

Edits, transitions, and clip effects will be preserved when opened in the other applications. Any changes to the sequence made in Adobe Premiere Pro will be immediately reflected in the other applications and vice versa.

Opening Adobe Premiere Pro Project Files In Other CS6 Applications

Note: Dynamic Link between After Effects, Encore, and Adobe Premiere Pro is now available with Production Premium, Master Collection, or Adobe Creative Cloud membership as well as when the software applications are purchased separately.

After Effects and Encore have the ability to open Adobe Premiere Pro .prproj files, including P2 projects. A .prproj file can be opened directly in After Effects by going to File>Import>Adobe Premiere Pro project and navigating to a .prproj file. An Adobe Premiere Pro sequence can be opened at File>Adobe Dynamic Link>Import Adobe Premiere Pro Sequence and navigating to a .prproj file. All the sequences in the Adobe Premiere Pro project will then be displayed and can be chosen from.

A .prproj file can be opened in Encore through File>Adobe Dynamic Link>Import Adobe Premiere Pro Sequence and again navigating to the file. As with After Effects, the sequences associated with the Adobe Premiere Pro project will then appear and can be chosen from.

Part 4: Working with P2 footage in After Effects

After Effects, the industry-standard compositing, motion graphics and visual effects program, supports P2 material natively. It supports all P2 formats and frame rates. After Effects can accept the P2 files directly in a stand-alone composition, or it may accept Adobe Premiere Pro P2 projects or sequences via Dynamic Link, or by opening them directly from the .prproj file.

Importing footage into After Effects

P2 material can be imported by going to File>Import and then navigating to the Video folder of a P2 card, or by dragging/dropping the MXF files from the folder into the Project panel. If a single, continuous take was split into 4 GB sections when recorded, the separate clips will be imported as a single clip.

After Effects project setup

The equivalent to a sequence in Adobe Premiere Pro is a composition in After Effects. If you have imported your footage into the project before creating a composition, you can simply drag a footage asset to the Create a New Composition square at the bottom of the Project panel. This will automatically create a composition which matches the properties of the footage.

To create a composition manually, go to Composition>New Composition. A dialogue box will appear in which you can define the attributes of the composition, including frame size, frame rate, etc. There are numerous presets available. As with Adobe Premiere Pro, choose the preset which best fits your footage, or define your own composition settings manually.

Working with 24p pulldown in After Effects

After Effects can work with files of any frame rate. However, for frame rates shot in "over-60" modes, such as 24p with pulldown in 60i or 60p streams, the files must be manually converted to the native frame rate by right-clicking or Control-clicking and choosing Interpret Footage, as described in Adobe Premiere Pro above, then choosing "Main."

From there, in the "Fields and Pulldown" box, you can choose to remove the type of pulldown in the footage, 3:2 pulldown (standard) or 2:3:3:2 pulldown ("24P Advance"). If the Remove Pulldown

drop-down is blank, you can choose from the "Guess 3:2 Pulldown" or "Guess 24Pa Pulldown" buttons underneath, depending on whether you shot with standard 3:2 pulldown or with Advanced pulldown. (Footage shot in the 720P/24P "over-60" mode will always use 3:2 pulldown.)

Or, you can enter the frame rate manually in the "Conform to frame rate" box.

Integration with Adobe Premiere Pro

After Effects integrates with Adobe Premiere Pro in a number of ways.

Importing Adobe Premiere Pro sequences—As noted above (p. 14), After Effects can open Adobe Premiere Pro .prproj files directly. When opened, all of the Adobe Premiere Pro project media and sequences will appear in the Project panel of After Effects.

Dragging an Adobe Premiere Pro sequence to a composition timeline will open that sequence on the timeline. All media will appear in the same arrangement as it does in the Adobe Premiere Pro sequence, and will preserve some effects and transitions applied in Adobe Premiere Pro.

(Opening an Adobe Premiere Pro project in After Effects is the same as copying/pasting between Adobe Premiere Pro and After Effects; see *Copy Between After Effects and Adobe Premiere Pro* in Adobe After Effects Help for a list of preservations and conversions.)

Using Adobe Dynamic Link—in Adobe Premiere Pro, an option exists under File>Adobe Dynamic Link to "Create New After Effects Composition", which will launch After Effects, and create a new composition. That composition will be linked to the Adobe Premiere Pro project as a composition which appears in the Project panel. That composition may be dropped into an Adobe Premiere Pro sequence as a self-contained clip. Any changes made in the composition in After Effects will automatically be reflected on the timeline in Adobe Premiere Pro.

Likewise, in the After Effects File menu, a choice under Adobe Dynamic Link is "New Adobe Premiere Pro Sequence." Here, a sequence will be created in Adobe Premiere Pro and appear as "Linked Sequence" in the After Effects Project panel. Any changes made to the sequence in Adobe Premiere Pro will be automatically reflected in the composition in After Effects.

Also available is the ability to open selected clips in the Adobe Premiere Pro timeline in After Effects and replace them automatically with an After Effects composition. In Adobe Premiere Pro, select the desired clips, then right-click or Control-click one of them and select "Replace With After Effects Composition." After Effects will then launch and a new composition will automatically be created with the selected clips already on the composition timeline.

In Adobe Premiere Pro, the selected clips will then show as a single clip. Changes made to the clips in the composition will be reflected on the Adobe Premiere Pro timeline each time you return to Adobe Premiere Pro. Clips formerly occupying multiple tracks will now appear on a single track, and there will be a red bar.

Rendering and exporting footage from After Effects

As a movie file

To export a movie from After Effects, use the Render Queue. You can access the Render Queue by going to Composition> Add to Render Queue. Here you can select from many formats and format settings, or add multiple formats and settings to create multiple movie files of multiple formats.

As an Adobe Premiere Pro Project

A choice in the File>Export menu is "Adobe Premiere Pro project." This will allow you to export an After Effects project in Adobe Premiere Pro format. The resulting .prproj file can then be opened in Adobe Premiere Pro; a folder will appear in the Project panel containing all of the media in the project, and each composition will appear as a separate clip. Compositions can then be added to a sequence timeline as a self-contained clip.

System requirements
Please visit:
www.adobe.com/products/premiere/systemreqs

Part 5: Overview of Production Premium HD delivery options

There are several common methods for delivering HD content: exporting for web or mobile device, for high-definition Blu-ray Disc delivery, and to tape for broadcast.

P2 format

Apart from exporting from Adobe Premiere Pro or After Effects, Adobe Media Encoder can also be used independently to create virtual P2 cards from stand-alone media files. For example, a card can be made from a single MXF video file by choosing "Add . . ." and then navigating to the Video folder of a P2 card and choosing the file. As long as the P2 file structure in that card is intact, the associated audio files will be included, and a new P2 card can be made, containing only that video file.

Any video file can be transcoded to a P2 format using Media Encoder, simply by choosing "P2 Movie" as the Format, and then choosing one of the options in the Preset drop-down. The presets may also be edited, but straying from the existing presets may create a file incompatible with P2 formats and equipment.

Web content

The most common formats for online delivery are Flash, QuickTime, Windows Media, and AVC/MP4. Flash is also often used for delivering high-resolution video content on CD or DVD. Web formats are created as data files and most formats are exported from Adobe Premiere Pro through Adobe Media Encoder.

Flash video

Standard .f4v and .flv files can be created from Adobe Premiere Pro via Adobe Media Encoder. A project can also be sent via Dynamic Link to Encore, which can encode in .flv or .swf format for direct delivery to the Web as a Web version of a DVD or Blu-ray Disc project.

Other formats

The other Web formats can be encoded from Adobe Premiere Pro or After Effects using Adobe Media Encoder. The available common Web formats available include H.264, MPEG-4, Windows Media, and QuickTime. Most formats have a wide variety of presets available, and each can be customized. These options range from small frame all the way up to HD content.

Blu-ray Disc authoring

Adobe Encore can be used to make a Blu-ray Disc image, or with a Blu-ray burner, burn a Blu-ray Disc. An Adobe Premiere Pro or After Effects project can be sent by Dynamic Link to Adobe Encore, which can then author the project for Blu-ray Disc delivery. A selection of Blu-ray format options is available.

HD tape for broadcast

As with archiving, printing to HD tape for broadcast will require the installation of a High Definition hardware card, such as those from AJA or Blackmagic Design, and a deck which records in the desired format. To print to tape, choose File>Export to Tape, and then the appropriate deck option through the hardware card.

Written by David Jimerson, co-owner of Wrightsville Beach Studios, Ltd. David Jimerson is a producer and the editor of series of instructional DVDs for Panasonic P2 cameras and P2 workflows, available at www.hvxtraining.com.

For more information
Product details:
www.adobe.com/products/creativesuite/production

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